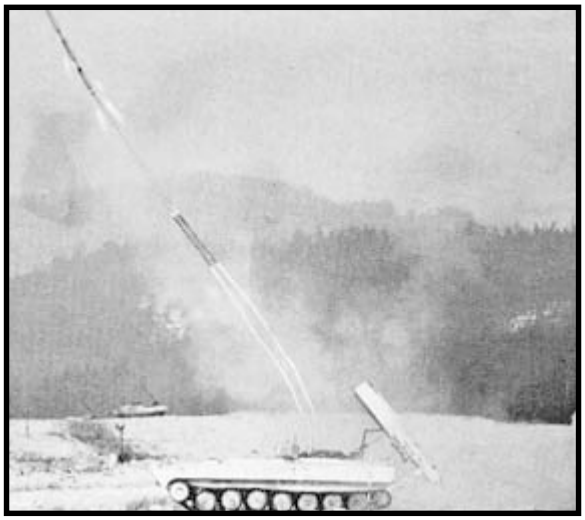
CTC Notes

National Training Center

Opposing Force's (OPFOR's) MTK-2

By Captain Thomas F. Nelson and Sergeant First Class Gary A. Smith

As the National Training Center (NTC) continues to implement the contemporary operational environment, the OPFOR will adjust its equipment inventory to better match threat capabilities. The MTK-2, the latest addition to the engineer inventory, provides the OPFOR with an explosive reduction capability that greatly enhances its flexibility across the battlespace. Though there are several sources that differ in their descriptions of the MTK-2, the NTC based its system on TRADOC's worldwide equipment guide and implemented an addition to NTC's rules of engagement (ROE).



MTK-2 in operation

Capabilities

Based on the 2S1 self-propelled howitzer chassis, the MTK-2 has a turret-like superstructure that contains three UR-77 rockets on launch ramps. The range of the rockets is about 200 to 400 meters. Each rocket is connected via a towing line to 170 meters of mine clearance hose that is stowed folded in the uncovered base of the turret on the vehicle roof. The hose, with pressure fuses, is command-detonated to clear a path up 140 meters long and 6 meters wide through minefields. The MTK-2 is capable of operating in a nuclear, biological, and chemical environment and has good cross-country capability.

Characteristics

The visual modification (VISMOD) of the MTK-2 is built up on an M113 chassis and includes the launching tubes and Smokey Sam rail. The organic OPFOR engineers, the 58th Engineer Company, configured three MTK-2 VISMODs. The MTK-2 will fight as a component of the movement support detachment for offensive missions. It will use the Multiple Integrated Laser-Engagement System (MILES) II.

NTC MTK-2 ROE

The MTK-2 is a similar vehicle to the U.S. Army armored vehicle-launched mine-clearing line charge (MICLIC) (AVLM); therefore, the OPFOR will simulate reduction with the MTK-2 using the same procedures as for the AVLM.

MTK-2 VISMOD (with launch tubes raised)

For each charge, 100 x 7 meters are allowed. The tank commander (or third crew member) will dismount from the vehicle and walk the vehicle through the minefield. An observer/controller will remove mines as the tank commander encounters them (only the mines directly in front of the vehicle to create a 7- by 100-meter lane).

The OPFOR will not transport an engineer squad in the MTK-2 VISMOD during offensive operations, nor will the vehicle be used in conjunction with the obstacle detachment.

The points of contact (POCs) for OPFOR engineer issues are CPT Tom Nelson (Red Devil 6), e-mail *NelsonTF @irwin.army.mil* and SFC Gary Smith (SW09), DSN 380-5151 or e-mail *Sidewinder09@irwin.army.mil.*

Leader's Training Program (LTP)

By Major Michael W. Rose and Captain Thomas B. Hairgrove, Jr.

The NTC offers a six-day LTP about 120 days before a scheduled rotation. Though the Wrangler Team is responsible for the brigade LTP, the Sidewinders provide additional resources to enhance the LTP experience.

LTP Attendees and Tools

To get the most from the LTP, the Sidewinders recommend that the following engineer battalion personnel attend:

- Battalion commander
- Battalion executive officer (XO)
- S3
- S2
- Assistant brigade engineer
- Assistant S3 (planner or battle captain)
- S1 or S4
- Company commanders
- Company XOs
- Specialty leaders (light engineer platoon, combat support equipment, explosive ordnance detachment)

The following tools are recommended:

- NTC maps
- Modified combined obstacle overlay of NTC
- Pluggers
- Laptop computers
- Printer
- Tactical standard operating procedure (SOP)
- Binoculars
- Digital camera
- TerraBase w/ MrSids Imagery
- NTC ROE
- Field Manuals 101-5, *Staff Organization and Operations*; 101-5-1, *Operational Terms and Graphics*; 3-90.3, *The Mounted Brigade Combat Team*; 5-71-3, *Brigade Engineer Combat Operations (Armored)*; 5-71-2, *Armored Task-Force Engineer Combat Operations*; 20-32, *Mine/ Countermine Operations*; 90-7, *Combined Arms Obstacle Integration*; and 3-34.2, *Combined Arms Breaching Operations*.

Planners 101

The Sidewinder team conducts two classes during an LTP that are designed to enhance the performance of the engineer battalion planners. Both battalion and company-level planners benefit from the session. The first class is *NTC Terrain Analysis*; it focuses on how to provide the "so what" of terrain to the commander. The second class, *Engineer Planning at the Basic Combat Training and Task Force Level*, provides a planner's overview and tactics, techniques, and procedures (TTP) for planning in a time-constrained environment.

Brigade Combat Team Classes

The following classes are also available, by request, for either the engineer battalion and/or the brigade LTP participants: *Combined Arms Breaching Operations* and *Combined Arms Obstacle Integration.* Since trends at the NTC indicate that these two subjects pose significant challenges to brigade combat teams, we recommend that units work through their brigades to schedule these classes.

The POCs for the LTP are MAJ Michael Rose (SW03), e-mail *Sidewinder03@irwin.army.mil,* and CPT Tom Hairgrove (SW03B), DSN 380-5151, or e-mail *Sidewinder03B @irwin.army.mil.*

Reception, Staging, Onward Movement, and Integration (RSOI) MICLIC Range

By Captain James R. Koeppen and Major Michael W. Rose

To improve the battlefield performance of combat engineers, in particular MICLIC employment, the 52d Infantry Division now mandates in-theater training on the MICLIC by RSOI 4. Historically, units that have fired live rockets and high-explosive line charges during RSOI have maintained better MICLIC launcher operational-readiness rates and have had fewer misfires during the live-fire portions of their rotations. The Sidewinder team recognizes the tremendous potential this additional training offers and will ensure that every effort is made to include this event in each rotation.

Initial coordination for the RSOI MICLIC Range should occur during the LTP. During the LTP, the Sidewinder Team will provide the unit with a compact disk (CD) containing the MICLIC Range SOP that has a general overview of the event, rotational unit responsibilities, range layout with surface danger zones, sample memorandums required by Fort Irwin Range Control, Fort Irwin POCs, and a sample battalion operations order (OPORD). A MICLIC CD is also available from the Sidewinder team and includes TTP, photos, and other information to prepare units in their train up.

A MICLIC detonation

The following are keys to successful execution of the RSOI MICLIC range:

- This is a battalion effort; a single company cannot plan and resource this training.
- Issue a battalion OPORD for this training before deployment.
- Get the range officer in charge and range safety officer to range control on RSOI 1 or during the LTP.
- Coordinate with the Sidewinder team for MICLIC inspections on RSOI 2 or 3.
- Check your blasting machines with voltmeter (M34–220 volts, CD450-4J–220 volts, and a fresh 9-volt battery).
- Draw ammo no later than 1600 RSOI 3 and coordinate with the Sidewinder team to conduct joint inspection of ammo on RSOI 3.
- Plan to begin range operations no later than 0700 on RSOI 4; this will get you off the range by 1200.
- An M985 heavy expanded, mobility tactical truck (HEMTT) is required (M977 series does not have lift capacity for MICLIC tubs).

The POCs for the RSOI MICLIC range are MAJ Michael Rose (SW03), e-mail *Sidewinder03@irwin.army.mil* and CPT Jim Koeppen (SW11), DSN 380-7055, or e-mail *Sidewinder11 @irwin.army.mil.*

Joint Readiness Training Center

Troop-Leading Procedures (TLPs) for Task Force Engineers

By Captain Mark C. Quander

A trend that has become prevalent at the Joint Readiness Training Center (JRTC) among rotational engineer units is the lack of thorough TLPs. This has resulted in vague tasks and purposes for squad leaders and poor allocation of troops to engineer tasks. While most people understand the definition of TLPs and their functions, rarely are TLPs ever executed. Engineers have a method of linking the military decision-making process (MDMP) and TLPs through the engineer estimate (see Figure 1). Some of the critical issues observed at the JRTC follow.

Issuing Warning Orders (WARNORDs)

While missions are received and WARNORDs issued, it is common that the WARNORDs are incomplete. Key items missing from them include a clearly stated mission, specified subunit tasks with a purpose, critical precombat checks (PCCs) and precombat inspections (PCIs), and a tentative time schedule. Tentative plans are normally inadequate since proper mission analysis—which includes the engineer battlefield assessment (EBA), specified tasks, implied tasks, and facts and assumptions—are not delineated and known. Platoon- and squad-level operations orders (OPORDs) are normally only very detailed WARNORDs and lack the coordinating instructions necessary for integral and synchronized combined-arms fight. Doctrinally, leaders should issue three WARNORDs; at a minimum, they should address the—

- Higher headquarters restated mission (WARNORD #1).
- Terrain analysis and associated products (WARNORD #2).
- Engineer enemy composition, disposition, and strength (WARNORD #2).
- OPORD location and time (WARNORD #2).
- Updated timeline (WARNORD #2).

Relationship Between the Military Decision-Making Process, the Engineer Estimate, and Troop-Leading Procedures

Military Decision-Making Process	Engineer Estimate	Troop-Leading Procedures
Receive the mission	**Receive the mission** - Issue the WARNORD to subunits	**Receive the mission**
Develop facts and assumptions	**Conduct IPB/EBA** - Enemy engineer capability - Friendly engineer capability - Impact of terrain and weather	**Issue a WARNORD** - State the mission - Specify essential tasks to sub-units, critical PCCs - Issue timeline
Analyze the mission	**Analyze the engineer mission** - Specified tasks - Implied tasks - Constraints - Limitations	**Make a tentative plan** - Backward plan action from the objective(s) - Assign mission to subunits - 1/3 - 2/3 time management rule - Subunits conduct PCCs
Issue the commander's guidance	**Develop the SOEO** - Resource the essential tasks with generic units and specific classes of supply	**Initiate necessary movement**
Develop courses of action (COAs)	**War-game and refine the engineer plan** - Focus on key events in the operation - Backward plan from the objective(s) - Identify shortfalls in resources - Identify benefits and risk for each course of action (COA)	**Conduct reconnaissance** - Leader reconnaissance of critical objective areas - Subunits conducting individual and squad rehearsals
Analyze COAs	**Recommend a COA**	**Complete the plan** - Modify the tentative plan based on results of recon
Decide on a COA and issue orders	**Finalize the engineer plan and issue orders**	**Issue the operations order** - Key leaders attend - Brief on terrain model or sketch - Graphics and execution matrix to squad level **Inspect, supervise, and rehearse** - Leaders conduct PCIs - Rehearsals at squad, platoon, and combined-arms levels

Figure 1

- Subunit instructions (WARNORD #2).
- Types of rehearsals and locations (WARNORD #3).

Developing the Scheme of Engineer Operations (SOEO)

Another prevalent trend is the lack of information in the SOEO paragraph, which is directly linked to platoon leaders failing to issue a task and purpose to subordinate units. Task force engineers conduct limited EBAs that do not fully support the task force's mission analysis. These deficiencies in the initial planning phases lead to an inability to better impact and multiply the mobility/survivability effects of the task force maneuver plan. A clearly stated task and purpose with complementing SOEOs is generally absent from orders.

Task force engineers can help overcome this problem by conducting a thorough EBA and then, with the commander's guidance, fully participating in the COA development of properly allocating troops to engineer tasks. During the construct of the EBA, they should, in concert with the battalion S2, conduct an intelligence preparation of the battlefield (IPB). It is then that they will develop the enemy engineer situational template, continually updating the information. Some call this reverse Battlefield Operating Systems (BOSs). You identify to the battle staff what you think the enemy engineers will do, given resources and available time. At the conclusion of the mission analysis, the task force engineer should be able to clearly articulate the enemy engineer capabilities, friendly engineer capabilities, and the effects that terrain and weather will have on the operation to both friendly and enemy forces

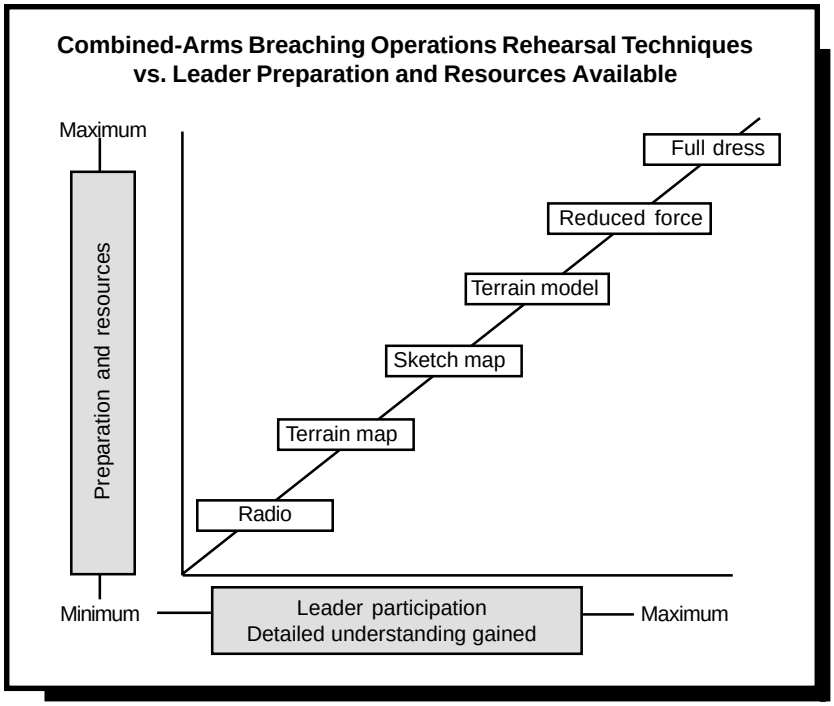


Figure 2

and whom it favors. Friendly engineer capabilities should not just focus on what assets are available. They should also focus on what the engineers can do with those assets down to how many breaches they can conduct or how much minefield frontage they can emplace with time and resources available. Task force engineers should also look at the other BOSs and see how they can assist the engineer effort in shaping the battlefield for task force commanders.

Once the task force engineers have completed a detailed EBA and understand the commander's guidance, they can begin identifying the task and purpose of engineer subunits. They will have proper troops for engineer tasks and can communicate this to the squad leaders or other engineer units in a second WARNORD and eventually the SOEO.

Rehearsing

Platoons conduct very few rehearsals, and those that are conducted focus only on the basic engineer missions. Full-force combined-arms rehearsals are generally absent. The engineer-only rehearsals are mainly conducted as "talk-throughs" and never address an uncooperative enemy or a contingency plan. During the issuance of the WARNORD, or at least the OPORD, the task force engineers/platoon leaders should specify what actions to cover during the rehearsal and the type of rehearsal to conduct.

Task force engineers also fail to identify critical engineer tasks that serve as their "actions on the objective"; therefore, they do not make those tasks the priority for rehearsals. They should give specific guidance for what to rehearse during the MDMP to the platoon sergeant so he can prepare the platoon as planning continues. The platoon sergeant must fully understand what type of rehearsals the platoon leader wants to conduct (confirmation brief, back brief, combined-arms rehearsal, support rehearsal, battle drill) and the various techniques so time is not wasted (see Figure 2). Failing to conduct rehearsals to standard also prevents a unit from identifying shortcomings in the plan.

The lack of combined-arms rehearsals degrades the platoon's effectiveness in areas such as communication from squad to platoon, understanding individual responsibilities for the mission, and actions on contact. Platoon leaders must vehemently insist on combined-arms rehearsals, conduct detailed engineer-specific rehearsals, and apply analysis to decide the appropriate rehearsal type and technique. There are various tools and techniques for combined-arms rehearsals in FM 3-34.2, *Combined-Arms Breaching Operations*. The more detailed the rehearsal, the greater understanding the soldiers will gain.

Summary

Task force engineers must learn to balance task force engineer duties and responsibilities as well as those of platoon leaders. The task force engineer will fail to accomplish the engineer mission if he does not first conduct a thorough EBA and then pass that information on to his subordinates. For those that are inexperienced, a planning or preparation checklist outlining what to provide subordinates during each step of the TLPs in the form of a WARNORD, SOEO, and OPORD will lead to better time management and better preparation by those subordinate units.

Captain Quander is a light engineer platoon senior observer/controller. Previous assignments include commander, C/326 Engineer Battalion (Air Assault)—deploying to Afghanistan in support of Operation Enduring Freedom; platoon leader, A/307 Engineer Battalion (Airborne); and assistant brigade engineer, 1st Brigade, 82nd Airborne Division.